Strategic Behavior of Firms in Differentiated Oligopoly

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ABSTRACT

In the context of differentiated oligopoly each firm attempts to pursue a predefined goal (such as price-cost margins, market share, dominant product line etc) and endeavors to achieve it through a specific strategy (price, advertising or any other aspect of its supply chain). That is, each firm attempts to achieve a monopoly and operate in its own niche. Contemporary studies of monopoly power concentrate on the consequences of strategic choices alone. The present study offers an algorithmic approach from a behavioral perspective to the identification of non-price strategies and objectives of individual firms that confer it a monopoly.

“And as regards practically all the finished products and services of industry and trade, it is clear that every grocer, every filling station, every manufacturer of gloves or shaving cream or handsaws has a small and precarious market of his own which he tries – must try – to build up and to keep by price strategy, quality strategy – ‘product differentiation’ – and advertising” – Schumpeter (1950, p. 79).

Keywords: Algorithmic Identification, Differential Oligopoly, Monopoly Power

1. THE BACKGROUND

Strategic decisions of firms, by definition, are unique to every firm on the basis of its assessment of market conditions. Essentially the behavior of the management of every firm exhibits its own idiosyncrasies. However, virtually axiomatically, the downfall brought about by attracting severe competition in the process of maximizing profits at each point of time, is never really desired. Instead, they adopt differential strategies to maintain what they achieved and try to improve their performance dynamically¹. Stated somewhat differently markets exist only in the context of certain decisions that govern activities between organizations while decisions that have strategic importance to only one or a few firms are mostly of a non-market character and distinct². In effect, behavioral approaches to strategic choices are enduring and reflect practical reality more accurately.

The great variety of observed objectives of firms and their strategic choices suggests that behavioral approaches must have a sound basis in empirical facts. However, historical facts can indicate only sequences and coincidences. Organized analysis and general commonsense reasoning would be necessary to facilitate the task of collecting, arranging and drawing inferences from them. As of today the requisite

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theoretical basis is missing or is at best highly inadequate. Consequently, empirical work did not progress in any meaningful fashion.

Against this backdrop the present study endeavors to develop an analytical basis to disentangle the strategic behavior of firms in differentiated oligopoly. The basic approach will be to define the strategy of a firm as a choice of a well-defined objective and specific price and/or non-price decisions utilized to achieve a distinct position for itself. The rest of the study is organized as follows. Section 2 outlines the various concepts related to the characterization of a firm in differentiated oligopoly as a monopoly. Section 3 then acknowledges the possibility that different firms may choose to target different goals such as attaining a higher market share, promoting the primary product of the firm and so on instead of adhering to the goal of achieving high price-cost margins. Monopoly power of firms should be specified in this general sense. In essence each firm may have monopoly with respect to a given objective and sustain it by adopting specific, and perhaps unique, non-price strategies. Section 4 outlines product differentiation and other non-price choices of the firm as the primary sources of monopoly power that it derives. Section 5 provides an algorithmic approach to the specification of which objective each firm is targeting and how they achieve that target through unique non-price strategies. Section 6 provides a summary of the achievements.

2. DEFINING MONOPOLY

Virtually every corporation within a broadly defined industry offers products that are differentiated from those of others in some ways that provide them the market advantage they have. In particular, Knight (1965, p.xxii) suggested that “nearly all suppliers of economic goods and services, outside of a few fields in which the identity of the seller is lost or production is according to specifications, enjoy some degree of monopoly. Each has a monopoly within a certain area, and competition is effective only at the boundary between market areas.” Some clarity with respect to the dimensions that provide monopoly to a firm within the framework of differentiated oligopoly is necessary.

Schumpeter (1950, p.99) noted that monopolies can be defined as “only those single sellers whose markets are not open to the intrusion of would-be producers of the same commodity and of actual producers of similar ones, or speaking slightly more technically, only those single sellers who face a given demand schedule that is severely independent of their own action as well as of any reactions to their action by others.” The underlying assumption is that the demand curve is exclusively determined by consumer preferences even when the firm makes an attempt to influence them. Firms would be successful only to the extent they can alter consumer choices and not just because they are trying to do so. However, it should be clear that the absence of the influence of other firms on the activities of any given firm may well be a red herring. In practice, very few firms in the corporate world satisfy these requirements of monopoly. Acknowledging such interdependence Knight (1965, p.241) argued that firms develop monopoly as a result of their ability to adapt faster to unforeseen or unexpected events. As he put it, “since production should be ahead of demand a firm may have a monopoly in anticipating future market requirements and making plans to fulfill requirements. For, men differ in their capacity by perception and inference to form correct judgments as to the future course of events in the environment.” This approach is closer to the view of Schumpeter though it provides one reason why a firm can insulate itself from others in the market. It should not be interpreted to imply that there cannot be any other source which distinguishes it from others.

A firm may well be a monopoly from the cost side as well. Marshall (1920, pp.240-322) outlined such features, both static and dynamic (evolutionary), that affect costs. More specifically, he noted that developments, representing a vast array of factors, of production and marketing organization within a firm, define the nature and extent of monopoly of a firm.
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